

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 4

Complete if Known

Application Number	10/804,379
Filing Date	03-19-04
First Named Inventor	Kolosov et al.
Group Art Unit	2855
Examiner Name	
Attorney Docket Number	1012-188

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
AL		4,767,719		Finlan	08/30/1988	
		4,922,745		Rudkin et al.	05/08/1990	
		5,283,037		Baer et al.	02/01/1994	
		5,296,374		Culshaw et al.	03/22/1994	
		5,306,644		Myerholtz et al.	04/26/1994	
		5,533,402		Sarvazyan et al.	07/09/1996	
		5,571,401		Lewis et al.	11/05/1996	
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		5,705,399		Larue	01/06/1998	
		5,741,961		Martin et al.	04/21/1998	
		5,744,902		Vig	04/28/1998	
		5,770,038		Iwama et al.	06/23/1998	
		5,798,452		Martin et al.	08/25/1998	
		5,827,952		Mansure et al.	10/27/1998	
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[illegible]

**Examiner
Signature**

Pyron Carter

Date Considered

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Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Sheet 1 of 1

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Application Number	10/804,379
Filing Date	03/19/2004
First Named Inventor	Kolosov et al.
Group Art Unit	2855
Examiner Name	
Attorney Docket Number	1012-188

U.S. PATENT DOCUMENTS

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		Number	Kind Code ² (if known)			
RC		3,622,968		Silverman	11/23/1971	
		3,718,032		Gray	02/27/1973	
		3,778,757		Houston	12/11/1973	
		4,342,936		Marcus et al.	08/03/1982	
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		Office ³	Number ⁴	Kind Code ⁵ (if known)				
RC			EP 0102490		Bopp & Reuther GMBH	03/14/1984		
			EP 0282251		Schlumberger Electronics	09/14/1988		
			EP 0676638		Tektronix, Inc.	10/11/1995		
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			WO 00/67086		Symyx	11/09/2000		
			WO 99/18431		Symyx	04/15/1999		
			GB 2187286		Hatschek	09/03/1987		

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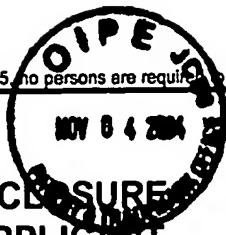
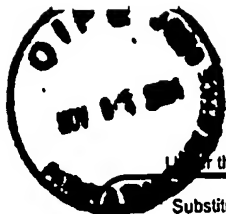
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Sheet

1

of

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First Named Inventor	Kolosov et al.
Art Unit	2855
Examiner Name	
Attorney Docket Number	1012-188

U. S. PATENT DOCUMENTS

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		Number-Kind Code ² (if known)			
ZC		US- 2002/0162385	11/7/2002	Ismail et al.	
		US- 3,710,275	1/9/1973	Tanaka et al.	
		US- 4,549,427	10/29/1985	Kolesar, Jr.	
		US- 4,802,370	2/7/1989	EerNisse et al.	
		US- 5,334,900	8/2/1994	Kawashima	
		US- 5,445,008	8/29/1995	Wachter et al.	
		US- 6,286,363	9/11/2001	Discenzo	
		US- 6,644,095	11/11/2003	Van Mullekom et al.	
		US- 6,023,961	2/15/2000	Discenzo et al.	
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		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				

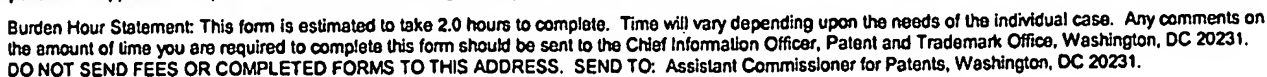
Examiner
Signature*John Carter*Date
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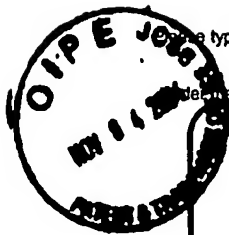
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known			
		Application Number	10/804,379		
		Filing Date	03-19-04		
		First Named Inventor	Kolosov et al.		
		Group Art Unit	2855		
Sheet	1	of	1	Examiner Name	
				Attorney Docket Number	1012-188

U.S. PATENT DOCUMENTS						
Examiner Initials ¹	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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jc		5,357,964		Spivey et al.	10/1994	
		5,375,470		Matsushima et al.	12/1994	
		5,454,045		Perkins et al.	09/1995	
		5,455,475		Josse et al.	10/1995	
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		5,524,636		Sarvazyan et al.	06/1996	
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		3,902,365		Knauth	09/02/1975	
		4,312,228		Wohltjen	01/26/1982	
		4,596,697		Ballato	06/24/1086	
		4,760,351		Newell et al.	07/26/1988	

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		Office ³	Number ⁴	Kind Code ⁵ (if known)				

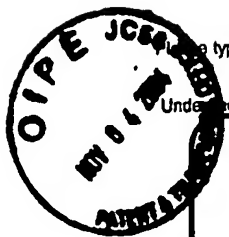
Examiner Signature	<i>Ryan C. Jones</i>	Date Considered	6-1-06
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Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete If Known	
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		Number	Kind Code ² (if known)			
JK		4,103,224		Taro et al.	7/25/1978	
		5,885,849		Di Stephano et al.	3/23/1999	
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		Office ³	Number ⁴	Kind Code ⁵ (if known)				

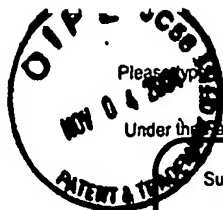
Examiner Signature	<i>[Signature]</i>	Date Considered	6-1-06
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✓		5,918,354		Ikegami et al.	7/6/1999	
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		5,204,529		Diatschenko	4/20/1993	
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		Office ³	Number ⁴	Kind Code ² (if known)				
✓			JP 11094726		Suzuki et al.	9/19/1997		
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Date

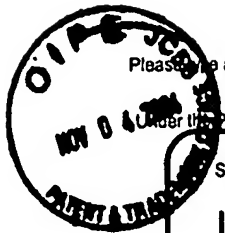
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Examiner Initials ¹	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ³
		Office ³	Number ⁴	Kind Code ² (if known)				
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Sheet 1 of 1

Complete if Known

Application Number	10/804,379
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First Named Inventor	Kolosov et al.
Group Art Unit	2855
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Attorney Docket Number	1012-188

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Sheet 1 of 0

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Filing Date 03-19-04

First Named Inventor Kolosov et al.

Group Art Unit 2855

Examiner Name

Attorney Docket Number 1012-188

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

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RC		Patent Abstracts of Japan, Publication No. 05-129874, Application No. 03-291660, filing date 11/7/1991, Applicant: Seiko Epson Corp.	
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Sheet 1 of 0

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Attorney Docket Number	1012-188

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RC		U.S. Application Serial No. 09/420,334 entitled "Graphic Design of Combinatorial Material Libraries" (Lacy, et al.) filed on October 18, 1999	
		U.S. Patent Application Serial No. 09/305,830 titled "Synthesizing Combinatorial Libraries of Materials" (Rust, et al.) filed on May 5, 1999	
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		The family of applications for U.S. Patent Application Serial No. 09/174,856 titled "Graphic Design of Combinatorial Material Libraries" (Lacy, et al.) filed on October 19, 1998.	
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Sheet 1 of 0

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Application Number	10/804,379
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Filing Date	03-19-04
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First Named Inventor	Kolosov et al.
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Group Art Unit	2855
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Attorney Docket Number	1012-188
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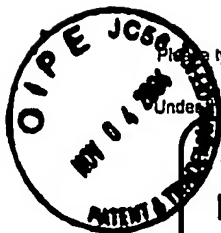
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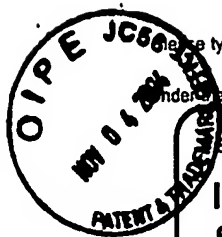
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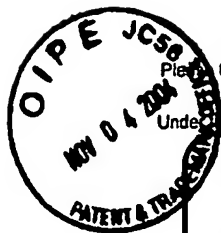
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Re		"Theory of the Vibrating Tuning Fork Fluid Density Tool", www. lancs.ac.uk, page 1, accessed on May 7, 2003.	
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		"CJV-5000 Vibro Viscometer Utilizing Tuning-Fork Technology", Yahoo Search accessed on June 18, 2003.	
		"SOS-Smart Oil Sensor", Impact Technologies, LLC.	
✓		Pamphlet by Kavlico-A Solectron Company, Capability Brochure Industrial Sensors and Transducers.	

Examiner Signature		Date Considered	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 0

Complete if Known

Application Number	10/804,379
Filing Date	03-19-04
First Named Inventor	Kolosov et al.
Group Art Unit	2855
Examiner Name	
Attorney Docket Number	1012-188

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
RL		"Theory of the Vibrating Tuning Fork Fluid Density Tool", www.lancs.ac.uk, page 1, accessed on May 7, 2003.	
		"A Vibrating Tuning Fork Fluid Density Tool", www.smithinst.ac.uk, page 1, accessed on February 2, 2004.	
		"SINIMS Oil and Gas Workshop", Draft: Notes of presentations and discussions, ICMS, Edinburgh, March 11, 2002.	
		"Field Trials of The Viscosity & Fluid Density Tool (VFD)", Nan Gall Technology, published August 2002.	
		"ViscoMaster HFO Viscosity Transmitter for Marine and Power Applications", Solartron Mobrey.	
		"CJV-5000 Vibro Viscometer Utilizing Tuning-Fork Technology", Yahoo Search accessed on June 18, 2003.	
		"SOS-Smart Oil Sensor", Impact Technologies, LLC.	
		Pamphlet by Kavlico-A Solectron Company, Capability Brochure Industrial Sensors and Transducers.	

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Ryan Carter

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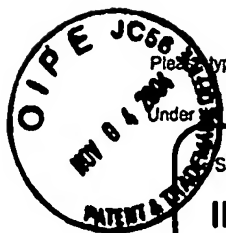
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 0

Complete if Known

Application Number 10/804,379

Filing Date 03-19-04

First Named Inventor Kolosov et al.

Group Art Unit 2855

Examiner Name

Attorney Docket Number 1012-188

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KL		A&D Weighing, SV Series Users' Handbook V1.04E, pp. 1-40.	
I		"EPSON presents the MC-30A: Reliable 32.768kHz Dedicated to Automotive Applications", August 25, 2003, www.epson.com, accessed on February 11, 2004.	
↓		LEC et al., "A Remote Acoustic Engine Oil Quality Sensor", 1997 IEEE UltraSonics Symposium, pp. 419-422.	
		ZHANG et al, "Contributions of Amplitude Measurement in QCM Sensors", IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 43, No. 5, September 1996, pp. 942-947.	

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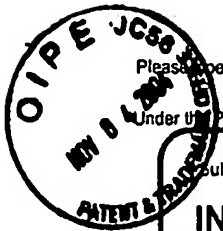
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 0

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Application Number	10/804,379
Filing Date	03-19-04
First Named Inventor	Kolosov et al.
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MC		SMITH et al., Water Sorption Isotherms and Enthalpies of Water Sorption by Lysozyme Using the Quartz Crystal Microbalance/heat Conduction Calorimeter, BIOCHIMICA et BIOPHYSICA ACTA, October 4, 2001, pages 150-159.	
		ULBRICHT, Helmar, Crimpen-eine ausgereifte AnschluBtechnik	
		International Search Report dated 8/4/2004, PCT/US2004/008552	
		Zeisel et al., A PRecise and Robust Quartz Sensor Based on Tuning Fork Technology for (SF6)- Gas Density Control, Elsevier Sciences, 2000	

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		Application Number	10/804,379
		Filing Date	03-19-04
		First Named Inventor	Kolosov et al
		Group Art Unit	2855
		Examiner Name	
Sheet 1	of 0	Attorney Docket Number	1012-188

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jc		J.W. Grate, et al, "Smart Sensor System for Trace Organophosphorus and Organosulfur Vapor Detection Employing a Temperature-Controlled Array of Surface Acoustic Wave Sensors, Automated Sample Preconcentration, and Pattern	
		"Viscosity and Density Sensing with Ultrasonic Plate Waves, B.A. Martin, S.W. Wenzel, and R.M. White, Sensors and Actuators, A21-A23 (1990), 704-708	
		"On-line Sensor for Density and Viscosity Measurement of a Liquid or Slurry for Process Control in the Food Industry" Margaret S. Greenwood, Ph.D. James R. Skorpik, Judith Ann Bamberger, P.E. Sixth Conference on Food Engineering, 1999 AIChE Annual Meeting, Dallas, Texas	
		"Micromachined viscosity sensor for real-time polymerization monitoring", O.Brand, J.M. English, S.A. Bidstrup, M.G. Allen, Transducers '97, 121-124 (1997)	
		"Frequency response of cantilever beams immersed in viscous fluids with applications to the atomic force microscope", J.E. Sader, J. Appl. Phys. 84, 64-76 (1998)	
		"Resonance response of scanning force microscopy cantilever", G.Y. Chen, R.J. Warmack, T.Thundat, and D.P. Allison, Rev. Sci. Instrum. 65, 2532-2537(1994)	
		"Lecture notes on shear and friction force detection with quartz tuning forks" Work presented at the "Ecole Thématique du CNRS" on near-field optics, March 2000, La Londe les Maures, France by Khaled Karrai, Center for	
		J. Sorab, G.S. Saloka: "Engine Oil Viscosity Swnsors Using Disks of PZT Ceramic as Electromechanical Vibrators" Society of Automotive Engineers SAE, no. 971702, 1997	
		E. Bohmer, "Elemente der angewandten Elektronik", August 1978, with English translation	

Examiner Signature	<i>Ryan</i> <i>Cate</i>	Date Considered	6-1-06
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 0

Complete if Known

Application Number	10/804,379
Filing Date	03-19-04
First Named Inventor	Kolosov et al.
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Attorney Docket Number	1012-188

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

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nc		Zhang et al.: "Determination of Liquid density with a low frequency mechanical sensor based on quartz tuning fork" Sensors and Actuators B, Elsevier Sequoia S.A. Lausanne, CH. vol. 84, no. 2-3, May 15, 2002, pages 123-128.	
		Shih et al.: "Simultaneous Liquid Viscosity and Density Determination with Piezoelectric Unimorph Cantilevers: Journal of Applied Physics, American Institute of Physics. New York, U.S., vol. 89, no. 2, January 15, 2001, pages 1497-1505.	
		Dring et al.: "Integrated on-line multisensing of fluid flow using a mechanical resonator" Sensors and Actuators A, Elsevier Sequoia S.A., Lausanne, CH, vol. 85, no. 1-3, August 25, 2000, pages 275-279.	
		International Search Report dated March 22, 2004 (PCT/US03/32982) 1012.183WO	
		International Search Report dated December 12, 2003 (PCT/US03/12503) 1012.171WO	
		Greenwood et al., "Measurement of Viscosity and Shear Wave Velocity of a Liquid or Slurry for On-line Process Control", Ultrasonics 39 (2002) pp. 623-630.	
		"Sensors", www.izm.fhg.de, accessed on October 3, 2002.	
		"Sensors and Actuators, INTELLEK Oil Condition Sensor", DELPHI Energy and Chassis Systems.	
		MURAMATSU et al., "Viscosity Monitoring with a Piezoelectric Quartz Crystal and Its Application to Determination of Endotoxin by Gelation of Limulus Amebocyte Lysate", March 8, 1988.	
		LANGDON, "Vibratory Process Control Transducers", The Marconi Review, Third Quarter, 1980, pp 156-175.	
		Invitation to Pay Additional Fees, PCT/US03/32983, mailed April 8, 2004. (1012.192WO)	

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